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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/653,744	09/01/2000	Paul E. Bender	PA000325	6680
23696	7590	12/28/2004	EXAMINER	
Qualcomm Incorporated Patents Department 5775 Morehouse Drive San Diego, CA 92121-1714				FERRIS, DERRICK W
				ART UNIT PAPER NUMBER
				2663

DATE MAILED: 12/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/653,744	BENDER, PAUL E.	
	Examiner	Art Unit	
	Derrick W. Ferris	2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 01 September 2000.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-18 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-18 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 23 September 2003 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____

5) Notice of Informal Patent Application (PTO-152)

6) Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. **Claims 1-3 and 10-12** are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,611,515 B1 to *Balachandran et al.* ("Balachandran").

As to **claim 1**, see figure 1 where the quality feedback channel 130 is an ACK/NAK channel and the receiver 135 is used to transmit ACK/NAK information, see e.g., column 4, lines 7-20 with respect to ACK/NAK information. A channel gate is taught by detecting a matching preamble or AMI value, see e.g., column 4, line 60 – column 5, line 35 with respect to a BEGIN frame where the receiver detects the mobile station identifier (i.e., MSID or AMI). In particular, the mobile station gates the channel for the duration of the transaction for both bounded and unbounded transactions e.g., see figures 23 and 24 with respect to flow control.

As to **claim 2**, a transaction is a series of data packets, each with a sequence number, see e.g., column 4, lines 19-30.

As to **claim 3**, if the mobile station ID is not the mobile station then the transaction does not take place.

As to **claim 10**, see similar rejection to claim 1.

As to **claim 11**, see similar rejection to claim 2.

As to **claim 12**, see similar rejection to claim 3.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 4 and 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,611,515 B1 to *Balachandran et al.* (“*Balachandran*”) in view of U.S. Patent No. 5,577,024 A to *Malkamaki et al.* (“*Malkamaki*”) and U.S. Patent No. 6,665,382 B2 to *Dunn et al.* (“*Dunn*”).

As such to **claim 4**, *Balachandran* discloses the limitations in the base claim.

Balachandran is silent or deficient to the further limitation of a BPSK modulator for modulating said ACK/NAK information and a multiplier for Walsh covering a result of said BPSK modulator to produce Walsh covered ACK/NAK information for transmission on said ACK/NAK channel. In particular, *Balachandran* discloses a feedback channel where different modulations are applied based on the measured interference, see e.g., column 4, lines 30-43.

Malkamaki teaches the further recited limitation above with respect to a multiplier for Walsh covering a result at e.g., column 3, lines 7-10. However, both *Balachandran* and *Malkamaki* are silent to further using a BPSK modulator. *Dunn* teaches the above limitation with respect to BPSK at e.g., column 5, lines 29-56.

The proposed modification of the above-applied reference(s) necessary to arrive at the claimed subject matter would be to modify *Balachandran* by clarifying that each

feedback channel is spread with a spreading code (i.e., Walsh code) which is further modulated by BPSK.

As such, examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to include the above limitation. In particular, the motivation for modifying the reference or to combine the reference teachings would be to use a Walsh code to spread the ACK/NAK information such that the information is not lost due to collusions and to use various modulations schemes including BPSK based on the data rate available. In particular, *Malkamaki* cures the above-cited deficiency with respect to a Walsh code by providing the above motivation found at e.g., column 3, lines 7-10 and *Dunn* cures the above-cited deficiency with respect to BPSK by providing the above motivation found at e.g., column 5, lines 29-56. Thus the references either in singular or in combination teach the above claim limitation(s).

As to **claim 16**, see similar rejection to claim 4

4. **Claims 6-8 and 13-15** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,611,515 B1 to *Balachandran et al.* ("*Balachandran*") in view of U.S. Patent No. 5,577,024 A to *Malkamaki et al.* ("*Malkamaki*")

As to **claims 6-8 and 13-15**, see similar rejection above for claim 4 where *Balachandran* may be silent or deficient to a portion of a time slot and *Balachandran* teaches a portion of time slot at e.g., column 1, lines 45-67. Hence examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to include a portion of a time slot for the ACK/NAK channel. As noted above, the motivation is the same due to an orthogonal scheme (i.e., in time) to avoid or reduce collisions. In

addition, the obviousness rejection above also applies to the limitation of wherein slot timing of said ACK/AK channel is skewed by a portion of a time slot from a slot timing used in said communication and wherein said ACK/NAK channel is transmitted by a portion of a slot time in advance of a slot timing used in said communication. In particular, the same rejection applies since the time-slot is varied in slot positions as mentioned above. In particular, the portion of time that the time slot is skewed is orthogonal. The portion of the time slot is also in advance of a slot timing used in the communication since the time slot relates to ACK/NAK information. In addition, see e.g., column 5, lines 15 – column 6, line 62 with respect to how the time slots are setup to meet the limitation.

As to **claim 13**, see similar rejection to claim 6.

As to **claim 14**, see similar rejection to claim 7.

As to **claim 15**, see similar rejection to claim 8.

5. **Claims 5, 9, 17, and 18** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,611,515 B1 to *Balachandran et al.* (“*Balachandran*”) in view of WO 99/23844 to *Padovani et al.* (“*Padovani*”).

As to **claim 5**, *Balachandran* is silent or deficient to the further limitation of a summer for summing said ACK/NAK channel and a data rate control/pilot channel. In particular, *Balachandran* discloses an ACK/NAK channel 130 but does not disclose summing the ACK/NAK channel with a data rate control/pilot channel.

Padovani teaches the above limitation of summing channels 654a and 654 b including a data rate control/pilot channel, e.g., see figure 6.

Examiner proposes to modify *Balachandran* to further include a summer such as the one taught by *Padovani*.

Thus examiner notes it would have been obvious to one skilled in the art prior to applicant's invention to include the above limitation. In particular, one skilled in the art would have been motivated to combine the references in order to sum or add the channels to send over the same interface. As such, *Padovani* teaches the above limitation e.g., in figure 6.

As to **claim 9**, see the above rejection using e.g., figure 6 which is for a reverse channel.

As to **claim 17**, see similar rejection to claim 5

As to **claim 18**, see similar rejection to claim 9

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derrick W. Ferris whose telephone number is (571) 272-3123. The examiner can normally be reached on M-F 9 A.M. - 4:30 P.M. E.S.T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2663

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Derrick W. Ferris
Examiner
Art Unit 2663

DWF



Derrick W. Ferris
12/21/2004